

**What is claimed is:**

- 5 1. A computer-implemented method for compressing data, the method comprising:  
determining difference information as a function of the data to be compressed;  
and  
responding to the difference information satisfying a size constraint by encoding the difference information with reference to a set of commonly occurring difference values for a type of the data to be compressed.
- 10 2. The method of claim 1, further comprising, before determining the difference information, storing an initial counter value for the data to be compressed.
- 15 3. The method of claim 1, further comprising:  
accumulating the encoded difference information in a buffer; and  
storing the contents of the buffer in a profiling data file in response to the buffer accumulating a predetermined amount of difference information.
- 20 4. The method of claim 3, further comprising, before storing the contents of the buffer in the profiling data file, compressing the contents of the buffer.
- 25 5. The method of claim 1, further comprising, if the difference information is timestamp difference information, encoding the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values.
- 30 6. The method of claim 1, further comprising, if the difference information is stack difference information,  
encoding the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and  
reconstructing a sign of the stack difference from a context of one of function entry and function exit.

7. The method of claim 1, further comprising, if the difference information is stack difference information, dividing a quantity represented by the difference information by four before encoding the difference information.

8. The method of claim 1, further comprising, if the data to be compressed represents stack information collected upon entry to and exit from a function, recording a single difference value for the stack information.

9. A computer-implemented method for compressing profiling data, the method comprising:

collecting the profiling data;  
determining difference information as a function of the collected profiling data;  
if the profiling data is timestamp data, encoding the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values; and  
if the profiling data is stack data,  
encoding the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and  
reconstructing a sign of the stack difference from a context of one of function entry and function exit.

10. A computer-readable medium having stored thereon computer-executable modules comprising:

at least one probe, configured to collect profiling data during execution of an application; and  
a buffer, configured to  
determine difference information as a function of the profiling data, and  
respond to the difference information satisfying a size constraint by  
encoding the difference information with reference to a set of commonly occurring difference values for a type of the profiling data.

11. The computer-readable medium of claim 10, wherein the buffer is further configured to, before determining the difference information, store an initial counter value for the data to be compressed.

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12. The computer-readable medium of claim 10, wherein the buffer is further configured to accumulate the encoded difference information, and wherein the computer-executable modules further comprise a logger, configured to receive and store the contents of the buffer in a profiling data file in response to the buffer accumulating a predetermined amount of difference information.

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13. The computer-readable medium of claim 12, wherein the buffer is further configured to, in response to accumulating the predetermined amount of difference information, compress the contents of the buffer and transfer the compressed contents to the logger.

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14. The computer-readable medium of claim 10, wherein the buffer is further configured to, if the difference information is timestamp difference information, encode the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values.

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15. The computer-readable medium of claim 10, wherein the buffer is further configured to, if the difference information is stack difference information, encode the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and reconstruct a sign of the stack difference from a context of one of function entry and function exit.

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16. The computer-readable medium of claim 10, wherein the buffer is further configured to, if the difference information is stack difference information, divide a


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quantity represented by the difference information by four before encoding the difference information.

17. The computer-readable medium of claim 10, wherein the buffer is further  
5 configured to, if the data to be compressed represents stack information collected upon entry to and exit from a function, record a single difference value for the stack information.

18. A computer-readable medium having stored thereon computer-executable  
10 modules comprising:

at least one probe, configured to collect profiling data during execution of an application; and

 a buffer, configured to  
determine difference information as a function of the collected profiling  
15 data,

if the profiling data is timestamp data, encode the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values, and

if the profiling data is stack data,  
20 encode the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and reconstruct a sign of the stack difference from a context of one of function entry and function exit.

19. A computer arrangement comprising:  
25 at least one probe, configured to collect profiling data during execution of an application; and  
a buffer, configured to  
determine difference information as a function of the profiling data, and

respond to the difference information satisfying a size constraint by encoding the difference information with reference to a set of commonly occurring difference values for a type of the profiling data.

5           20.    The computer arrangement of claim 19, wherein the buffer is further configured to, before determining the difference information, store an initial counter value for the data to be compressed.

10           21.    The computer arrangement of claim 19, wherein the buffer is further configured to accumulate the encoded difference information, and wherein the computer-executable modules further comprise a logger, configured to receive and store the contents of the buffer in a profiling data file in response to the buffer accumulating a predetermined amount of difference information.

15           22.    The computer arrangement of claim 21, wherein the buffer is further configured to, in response to accumulating the predetermined amount of difference information, compress the contents of the buffer and transfer the compressed contents to the logger.

20           23.    The computer arrangement of claim 19, wherein the buffer is further configured to, if the difference information is timestamp difference information, encode the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values.

25           24.    The computer arrangement of claim 19, wherein the buffer is further configured to, if the difference information is stack difference information, encode the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and

30                reconstruct a sign of the stack difference from a context of one of function entry and function exit

25. The computer arrangement of claim 19, wherein the buffer is further configured to, if the difference information is stack difference information, divide a quantity represented by the difference information by four before encoding the difference information.

26. The computer arrangement of claim 19, wherein the buffer is further configured to, if the data to be compressed represents stack information collected upon entry to and exit from a function, record a single difference value for the stack information.

27. A computer arrangement comprising:  
at least one probe, configured to collect profiling data during execution of an application; and  
a buffer, configured to  
determine difference information as a function of the collected profiling data,  
if the profiling data is timestamp data, encode the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values, and  
if the profiling data is stack data,  
encode the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and  
reconstruct a sign of the stack difference from a context of one of function entry and function exit.